

HEALTH

Insulin Resistance and Pre-Diabetes

Insulin resistance is a silent condition that increases the chances of developing diabetes and heart disease. Learning about insulin resistance is the first step toward making lifestyle changes that will help you prevent diabetes and other health problems.

What does insulin do?

After you eat, food is broken down into glucose, the simple sugar that is the main source of energy for the body's cells. But your cells cannot use glucose without insulin, a hormone produced by the pancreas, which helps the cells take in glucose and convert it to energy. When the pancreas does not make enough insulin or the body is unable to use the insulin that is present, the cells cannot use glucose. Excess glucose builds up in the bloodstream, setting the stage for diabetes. Being obese or overweight affects the way insulin works in your body. Extra fat tissue can make your body resistant to the action of insulin, but exercise helps insulin work more efficiently.

What are the symptoms of insulin resistance and pre-diabetes?

Insulin resistance and pre-diabetes usually have no symptoms. You may have one or both conditions for several years without noticing anything. If you have a severe form of insulin resistance, you may get dark patches on your skin, usually on the back of your neck. These dark patches may also appear on elbows, knees, knuckles and armpits, or as a dark ring around the neck. This condition is called acanthosis nigricans.

If you have a mild or moderate form of insulin resistance, a blood test may indicate normal or high blood glucose and high levels of insulin at the same time.

Can you reverse insulin resistance?

Yes, you can reverse insulin resistance with physical activity and weight loss. By losing weight and being more physically active, you may avoid developing type 2 diabetes. In 2001, the National Institutes of Health completed the Diabetes Prevention Program (DPP), which found that lifestyle changes reduced the risk of diabetes by 58 percent. Also, many people with pre-diabetes returned to normal blood glucose levels.

